

Appin. No. 10/030,987
Rule 312 Amendment

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Canceled)

Claim ³2. (Previously Amended) The method as claimed in Claim ²14, wherein the graft polymers have a hydrophilic and/or hydrophobic base polymer.

Claim ⁴3. (Previously Amended) The method as claimed in Claim ²14, wherein the hydrophilic base polymers are selected from the group consisting of polyalkylene glycols, polyvinyl alcohols, polyvinylamides, polyvinylpyrrolidone, polyethers, polyesters, polyurethanes, polyacrylamides, polysaccharides, cellulose ethers, polyalkyleneimines, polycarboxylic acids, polyvinylsulfonic acids, polyvinylphosphonic acids or and copolymers of the monomer components of these polymers.

Claim ⁵4. (Currently Amended) The method as claimed in Claim ³2, wherein the hydrophobic base polymers are selected from the group consisting of polyalkylene glycols, such as ethylene oxide-propylene oxide copolymers or ethylene oxide-propylene oxide block copolymers, polyethers, poly(meth)acrylates, polyolefins, polystyrene or styrene copolymers, polyvinyl acetate, polyvinyl ethers, polyvinyl formals, polyvinyl acetals, polyvinyl chloride or other halogenated polyvinyl compounds, polyacrylonitrile, polyamides, polyurethanes, silicones, polycarbonates, ~~polyterephthalates~~ ~~polyterephthalates~~, cellulose, cellulose ethers, cellulose esters, polyoxymethylene and copolymers of the monomer components of these polymers.

Claim 5. (Previously Amended) The method as claimed in Claim ²14, wherein the

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graft polymers contain grafted-on units of water-soluble and/or water-insoluble monomers.

⁷ Claim ~~6~~⁶. (Currently Amended) The method as claimed in Claim ~~5~~⁶, wherein the units grafted onto the base polymer make-up ~~make-up~~ from 10 to 90 % by weight of the graft polymer.

⁸ Claim ~~7~~⁸. (Previously Amended) The method as claimed in Claim ~~5~~⁶, wherein the units grafted onto the base polymer comprise N-vinylactams, N-vinylamides, acrylates, arylamides and/or a vinyl esters.

⁹ Claim ~~8~~⁹. (Previously Amended) The method as claimed in Claim ~~7~~⁸, wherein the units grafted onto the base polymer comprise N-vinylcaprolactam.

Claims ~~9~~¹⁰ and 10. (Canceled)

Claim ~~11~~¹². (Previously Amended) The graft polymer as claimed in Claim ~~14~~¹², wherein the hydrophilic base polymer is polyethylene glycol.

¹ Claim ~~12~~¹. (Previously Amended) The graft polymer as claimed in Claim ~~13~~², wherein the unit grafted onto the base polymer is N-vinylcaprolactam.

¹² Claim ~~13~~¹². (Previously Amended) A process for preventing or reducing the formation of gas hydrates in liquid or gaseous systems, which comprises:

adding a graft polymer of Claim 15 to the liquid or gaseous system.

² Claim ~~14~~². (Previously Presented) A method of inhibiting gas hydrates, comprising:
contacting a gas hydrate with a graft copolymer.

¹ Claim ~~15~~¹. (Previously Presented) A graft polymer comprising:

a hydrophilic base polymer which is a polyalkylene glycol, a polyether or a polymer having at least one heteroatom in the main chain, with the proviso that polyphenylene ether is excluded as a base polymer, having a N-vinylactam grafted thereon.

¹³ Claim ~~16~~¹³. (Currently Amended) The graft polymer as claimed in Claim ~~15~~¹, wherein said

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polymer having at least one heteroatom in the main chain is a polyurethane or a polyalkyleneimine and said N-vinylactam is grafted onto the base polymer with a N-vinylamide, an acrylates ~~acrylate~~, an ~~arylamides~~ ~~acrylamide~~ and/or a vinyl ester monomer.

¹⁴
Claim ~~17~~. (Currently Amended) The method as claimed in Claim ⁷~~6~~, wherein the units grafted onto the base polymer ~~make-up~~ ~~make-up~~ from 25 to 75 % by weight of the graft polymer.

¹⁵
Claim ¹⁶~~18~~. (Currently Amended) A method of inhibiting gas hydrates, comprising:
contacting a gas hydrate with a graft copolymer prepared by graft polymerizing a N-vinylactam, a N-vinylamide, an acrylate, an arylamide or a vinyl ester onto a hydrophilic base polymer selected from the group consisting of polyalkylene glycols, polyvinyl alcohols, polyvinylamides, polyvinylpyrrolidone, polyethers, polyesters, polyurethanes, polyacrylamides, polysaccharides, cellulose ethers, polyalkyleneimines, polycarboxylic acids, polyvinylsulfonic acids, polyvinylphosphonic acids and copolymers of the monomer components of these polymers or onto a hydrophobic base polymer selected from the group consisting of polyalkylene glycols, polyethers, poly(meth)acrylates, polyolefins, polystyrene, styrene copolymers, polyvinyl acetate, polyvinyl ethers, polyvinyl formals, polyvinyl acetals, halogenated polyvinyl compounds, polyacrylonitrile, polyamides, polyurethanes, silicones, polycarbonates, ~~polyterephthalates~~ ~~polyterephthalates~~, cellulose, cellulose ethers, cellulose esters, polyoxymethylene and copolymers of the monomer components of these polymers, thereby removing water from the gas hydrate.

¹⁶
Claim ¹⁵~~19~~. (Previously Presented) The process as claimed in Claim ~~18~~, wherein the graft polymer is in the form of an aqueous solution or in a water/solvent mixture.